



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/630,971

07/31/2003

Luciano Lenzini

60091-00206

1843

32294 7590 07/20/2007
SQUIRE, SANDERS & DEMPSEY L.L.P.
14TH FLOOR
8000 TOWERS CRESCENT
TYSONS CORNER, VA 22182

EXAMINER

NGUYEN, KHAI MINH

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

07/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/630,971	Applicant(s) LENZINI ET AL.	
	Examiner Khai M. Nguyen	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25, 56 and 57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 56-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) ~ | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-25 and 56-57 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-25 and 56-57 are rejected under 35 U.S.C. 102(b) as being anticipated by IEEE Std 802.16-2001.

Regarding claim 1, IEEE std 802.16 teaches a data transmission method comprising:

first transmitting from a subscriber station at least one capacity request message (page 78, section 6.2.2.3.29, page 80, 6.2.3.3);

granting a capacity subscriber station-specifically by a base station (page 83, section 6.2.5);

second transmitting at least one capacity grant message from the base station (page 83, section 6.2.5);

connection-specifically allocating the granted capacity by the subscriber station (page 86, 6.2.6.1, page 88, 6.2.6.4);

third transmitting from the subscriber station at least one message wherein the at least one message comprises information based on previous capacity requests (page 86, 6.2.6.1, page 88, 6.2.6.4);

fourth transmitting data from the subscriber station according to a capacity allocation (page 86, 6.2.6.1, page 88, 6.2.6.4); and

monitoring by the base station of at least one of capacity request messages (table 58, page 85, section 6.2.5-6.2.5.4), capacity grant messages and received transmissions (page 86, section 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 2, IEEE std 802.16 teaches a data transmission method comprising:

first determining communication groups (page 90, section 6.2.6.4.2);

second determining a group priority order (page 86, section 6.2.6.1 (request IE any data grant burst type IE));

first transmitting at least one capacity request message from a subscriber station (page 78, section 6.2.2.3.29, page 80, 6.2.3.3);

granting a capacity subscriber station-specific by a base station (page 83, section 6.2.5);

second transmitting at least one capacity grant message from the base station (page 86, section 6.2.6.1 (request IE any data grant burst type IE));

scheduling connections by the subscriber station based on the communication groups (page 85, section 6.2.5.4), the group priority order and the granted capacity (page 85, section 6.2.5.4);

third transmitting from the subscriber station at least one message (page 86, 6.2.6.1, page 88, 6.2.6.4), wherein the at least one message comprises information based on previous capacity requests (page 86, 6.2.6.1, page 88, 6.2.6.4);

fourth transmitting data from the subscriber station, wherein the data is related to a connection scheduling (page 86, 6.2.6.1, page 88, 6.2.6.4); and

monitoring by the base station of at least one of capacity request messages (table 58, page 85, section 6.2.5-6.2.5.4), capacity grant messages and received transmissions (page 86, section 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 3, IEEE std 802.16 teaches the method of claim 2, wherein the first determining comprises determining the communication groups based on connection quality demands ((table 58, page 85, section 6.2.5-6.2.5.4)).

Regarding claim 4, IEEE std 802.16 teaches the method of claim 2, wherein the second determining comprises defining the group priority order based on connection quality demands ((table 58, page 85, section 6.2.5-6.2.5.4)).

Regarding claim 5, IEEE std 802.16 teaches the method of claim 2, wherein the first determining comprises determining the communication groups comprising a service class selected from at least one of Unsolicited Grant Service, Real-Time Polling Service, Non-Real-Time Polling Service and Non-Unsolicited Grant Service_((table 58, page 85, section 6.2.5-6.2.5.4)).

Regarding claim 6, IEEE std 802.16 teaches the method of claim 1, wherein the monitoring comprises monitoring data based on messages and transmissions using a memory table ((table 58, page 85, section 6.2.5-6.2.5.4)).

Regarding claim 7, IEEE std 802.16 teaches the method of claim 1, wherein the third transmitting comprises transmitting an update message that replaces at the base station a previous information connection-specific (page 86, 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 8, IEEE std 802.16 teaches the method of claim 1, wherein the third transmitting comprises transmitting an update message that replaces information based on a need for bandwidth for a connection (page 86, section 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 9, IEEE std 802.16 teaches the method of claim 1, wherein the monitoring by the base station comprises using information based on the request messages (page 86, section 6.2.6.1), the capacity grant messages and the received transmissions for avoiding a mismatch between a granted capacity and data received from a subscriber station (page 86, 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 10, IEEE std 802.16 teaches a communication system, the system comprising:

first transmitting means for transmitting capacity request messages (page 78, section 6.2.2.3.29, page 80, 6.2.3.3);

granting means for granting a capacity subscriber station-specific (page 83, section 6.2.5);

second transmitting means for transmitting capacity grant messages (page 83, section 6.2.5);

allocating means for connection-specific allocating the granted capacity (page 86, 6.2.6.1, page 88, 6.2.6.4);

third transmitting means for transmitting messages, wherein the messages comprise information based on previous capacity requests (page 86, 6.2.6.1, page 88, 6.2.6.4);

fourth transmitting means for transmitting data according to the capacity allocation made by a subscriber station (page 86, 6.2.6.1, page 88, 6.2.6.4); and

monitoring by the base station of at least one of capacity request messages, capacity grant messages and received transmissions (page 86, section 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 11, IEEE std 802.16 teaches a communication system, the system comprising:

grouping means for grouping connections into predetermined communication groups (page 90, section 6.2.6.4.2);

first transmitting means for transmitting capacity request messages (page 78, section 6.2.2.3.29, page 80, 6.2.3.3);

granting means for granting a capacity subscriber station-specific (page 83, section 6.2.5);

second transmitting means for transmitting capacity grant messages (page 86, 6.2.6.1, page 88, 6.2.6.4);

scheduling means for scheduling connections based on the communication groups (page 86, section 6.2.6.1, page 88, 6.2.6.4), a predetermined group priority order and the granted capacity (page 85, section 6.2.5.4);

third transmitting means for transmitting messages (page 86, 6.2.6.1, page 88, 6.2.6.4), wherein the messages comprise information based on previous capacity requests (page 86, 6.2.6.1, page 88, 6.2.6.4);

fourth transmitting means for transmitting data according to a connection scheduling (page 85, section 6.2.5.4); and

monitoring means for monitoring at least one of the request messages, the capacity grant messages and received transmissions (page 86, section 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 12 is rejected with the same reasons set forth in claims 3 and 4.

Regarding claim 13 is rejected with the same reasons set forth in claim 5.

Regarding claim 14 is rejected with the same reasons set forth in claim 6.

Regarding claim 15 is rejected with the same reasons set forth in claims 7 and 8.

Regarding claim 16 is rejected with the same reasons set forth in claim 9.

Regarding claim 17, IEEE std 802.16 teaches a base station, the base station comprising:

granting means for granting a transmission capacity subscriber station-specific (page 83, section 6.2.5);

transmitting means for transmitting capacity grant messages to at least one subscriber station (page 86, 6.2.6.1, page 88, 6.2.6.4); and

monitoring by the base station of at least one of capacity request messages, capacity grant messages and received transmissions (page 86, section 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 18, IEEE std 802.16 teaches the base station of claim 17, wherein the base station is configured to monitor data based on messages and transmissions using a memory table (table 58, page 85, section 6.2.5-6.2.5.4).

Regarding claim 19, IEEE std 802.16 teaches the base station of claim 17, wherein the base station is further configured to avoid a mismatch between a granted capacity (page 86, section 6.2.6.1) and data received from a subscriber station using information based on request messages, capacity grant messages and received transmissions (page 86, 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 20, IEEE std 802.16 teaches a subscriber station comprising:

first transmitting means for transmitting capacity request messages of at least one connection (page 78, section 6.2.2.3.29, page 80, 6.2.3.3);

receiving means for receiving capacity grant messages from a base station (page 83, section 6.2.5);

allocating means for allocating connection-specific a capacity granted by a base station (page 86, 6.2.6.1, page 88, 6.2.6.4);

second transmitting means for transmitting messages (page 86, 6.2.6.1, page 88, 6.2.6.4), wherein the messages comprise information based on previous capacity requests of a subscriber station (page 86, 6.2.6.1, page 88, 6.2.6.4); and

third transmitting means for transmitting data according to a capacity allocation made by the subscriber station (page 86, 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 21, IEEE std 802.16 teaches a subscriber station comprising:

A first transmitting unit configured to transmit capacity request messages of at least one connection (page 78, section 6.2.2.3.29, page 80, 6.2.3.3);

grouping unit configured to group connections into predetermined communication groups (page 90, section 6.2.6.4.2);

scheduling unit configured to schedule the connections based on the predetermined communication groups (page 85, section 6.2.5.4), a predetermined group priority order and a capacity granted by a base station (page 86, section 6.2.6.1 (request IE any data grant burst type IE))

second transmitting unit configured to transmit messages wherein the messages comprise information based on previous capacity requests (page 86, 6.2.6.1, page 88, 6.2.6.4); and

third transmitting unit configured to transmit data according to a connection scheduling (page 85, section 6.2.5.4).

Regarding claim 22, IEEE std 802.16 teaches the subscriber station of claim 21, wherein the communication groups comprise a service class selected from at least one of unsolicited grant service, real-time polling service, Non-Real-Time Polling Service and Non-Unsolicited Grant Service (page 85, section 6.2.5-6.2.5.4).

Regarding claim 23, IEEE std 802.16 teaches the subscriber station of claim 20, further comprising a fourth transmitting unit configured to transmit update messages

Art Unit: 2617

comprising information based on the previous capacity requests (page 86, 6.2.6.1, page 88, 6.2.6.4), wherein the update messages replace at the base station previous information on the connection (page 86, 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 24, IEEE std 802.16 teaches a base station configured to:

receive capacity request messages from at least one subscriber station (page 86, 6.2.6.1, page 88, 6.2.6.4);

grant a transmission capacity subscriber station-specific (page 86, 6.2.6.1, page 88, 6.2.6.4), transmit capacity grant messages to the at least one subscriber station (page 83, section 6.2.5); and

monitoring request messages received from the at least one subscriber stations (page 86, section 6.2.6.1, page 88, 6.2.6.4), capacity grant messages sent by a base station and data transmissions received from the at least one subscriber station (page 86, section 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 25, IEEE std 802.16 teaches a subscriber station configured to:

transmit capacity request messages of at least one connection (page 78, section 6.2.2.3.29, page 80, 6.2.3.3);

allocate connection-specific a capacity granted by a base station (page 83, section 6.2.5);

transmit messages wherein the messages comprise information on previous capacity requests (page 86, 6.2.6.1, page 88, 6.2.6.4); and

transmit data from a subscriber station according to a capacity allocation made by the subscriber station (page 86, 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 56, IEEE std 802.16 teaches a method, comprising:

transmitting capacity request messages of at least one connection (page 78, section 6.2.2.3.29, page 80, 6.2.3.3);

receiving capacity grant messages from a base station (page 83, section 6.2.5);

connection-specifically allocating a capacity granted by the base station (page 86, 6.2.6.1, page 88, 6.2.6.4);

transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station (page 86, 6.2.6.1, page 88, 6.2.6.4);
and

for transmitting data according to a capacity allocation made by the subscriber station (page 86, 6.2.6.1, page 88, 6.2.6.4).

Regarding claim 57, IEEE std 802.16 teaches a method, comprising:

transmitting capacity request messages of at least one connection (page 78, section 6.2.2.3.29, page 80, 6.2.3.3);

grouping connections into predetermined communication groups (page 88, section 6.2.6.4);

scheduling the connections based on the predetermined communication groups (page 85, section 6.2.5.4), a predetermined group priority order and a capacity granted by a base station (page 85, section 6.2.5.4);

transmitting messages wherein the messages comprise information based on previous capacity requests (page 86, 6.2.6.1, page 88, 6.2.6.4); and

transmitting data according to a connection scheduling (page 86, 6.2.6.1, page 88, 6.2.6.4).

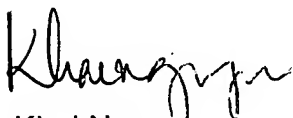
Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 571.272.7923. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571.272.7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Khai Nguyen
Au: 2617

7/13/2007



RAFAEL PEREZ-GUTIERREZ
SUPERVISORY PATENT EXAMINER

7/16/07